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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,150	11/17/2006	Nicole Dominique Hussey	0641-0273PUS1	3977

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BIRCH STEWART KOLASCH & BIRCH  
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EXAMINER
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CHUNDURU, SURYAPRABHA

ART UNIT	PAPER NUMBER
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1637

NOTIFICATION DATE	DELIVERY MODE
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11/27/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

## Office Action Summary

### Application No.

10/551,150

### Applicant(s)

HUSSEY ET AL.

### Examiner

Suryaprabha Chunduru

### Art Unit

1637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 125-132 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 125-132 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

1. The Applicants' response to the office action field on July 20, 2009 has been considered and acknowledged.

***Status of the application***

2. Currently claims 125-132 and new claim 148 are pending under examination. Claims 1-124, 133-147 are cancelled. Applicants' arguments and the amendment have been fully considered and deemed persuasive in-part for the reasons that follow. This action made FINAL.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

A. Claims 125-132, and 148 are rejected under 35 U.S.C. 102(a) as being anticipated by Fiegler et al. (Genes, Chromosomes & Cancer, Vol. 36, No.4, pp. 361-374, April 2003, published on line January 30, 2003).

Fiegler et al. teach a method of claims 125, 148 comparing at least one chromosome or part thereof from a cell with a first karyotype with the corresponding chromosome or part thereof from a cell with a second karyotype, comprising

(a) randomly amplifying DNA from an isolated chromosome or part thereof (DOP-PCR) the amplified DNA being depleted of repetitive sequences (treatment with Cot1 DNA) (see at

least page 362, col. 2, paragraph 3, page 363, col. 1, paragraph 1-2, col. 2, paragraph 1-3, page 364, col. 1, paragraph 2);

(b) attaching the amplified DNA to a solid substrate (see page 363, col. 2, paragraph 3);

(c) amplifying DNA from one or more cells (less than 100 cells) with a first karyotype (male) and amplifying DNA from one or more cells from a second karyotype (female) (see page 362, col. 2, paragraph 2, page 364, col. 1, paragraph 1, col. 2, line 5-18 of the paragraph 2, page 368, col. 2, line 6-9);

(d) labeling the amplified DNA of the first karyotype with a first label and amplified DNA of the second karyotype with a second label (see page 364, line 5-13 of the paragraph 2);

(e) hybridizing the amplified and labeled DNA from the first and the second karyotype with the amplified DNA attached to the solid substrate (see page 364, col. 2, paragraph 2, page 365, col. 1, line 1-15, col. 2, paragraph 2);

(f) comparing relative amount of first and second labels hybridized to the amplified DNA attached to the solid substrate (see page 366, col. 2, line 6-110, page 367, col. 1, paragraph 1, col. 2, line 1-9, page 368, col. 1, line 1-12), page 372, col. 2, paragraph 1).

With regard to claims 126, Fiegler et al. teach that the part of an isolated chromosome is a clone fragment of a chromosome (see page 362, col. 2, paragraph 3).

With regard to claims 127, Fiegler et al. teach that the repetitive sequences include cot-1 sequences (see page 364, col. 1, paragraph 2).

With regard to claim 128, Fiegler et al. teach that the amplification of DNA from cells with first and second karyotype comprises randomly primed amplification (see page 364, col. 2, paragraph 2).

With regard to claim 129, Fiegler et al. teach that the first karyotype comprises DNA amplified from one cell (see page 364, col. 2, paragraph 2).

With regard to claims 130-132, Fiegler et al. teach that the method comprises cancerous cells and the method for detecting a chromosomal abnormality (deletion) in the cell (see page 367, col. 1, paragraph 1). Accordingly the claims are anticipated.

***Response to Arguments:***

4. With regard to the informalities, Applicants' arguments and the amendment were fully considered and found persuasive. The objection to the informalities is withdrawn herein in view of the amendment.

5. With regard to the rejection of claims 127 and 141 under 35 USC 112, second paragraph, Applicants' arguments were fully considered and the rejection is withdrawn herein in view of the amendment.

6. With regard to the rejection of claims 125-132, 139-141, 145-147 under 35 USC 102 (a) as being anticipated by Fiegler, Applicants' arguments were fully considered and found persuasive in-part. With regard to the claims 139-141, and 145-147, the rejection is moot, in view of the cancellation of the claims by the amendment. With regards to the claims 125-132, Applicants' arguments were found unpersuasive. Applicants argue that Fiegler does not teach repeat-depletion of amplified sequences of the array and assert DOP-PCR does not lead to depleted repeat sequences. The arguments were found unpersuasive. First, the rejection does not indicate that the DOP-PCR leads to depleted repeat sequences rather the Examiner cited paragraphs with the sub-title hybridization to microarrays clearly teach pre-hybridization of microarray comprising randomly amplified BAC sequences were treated with Cot1 DNA (see page 364, col.

1, paragraph 2, line 10-16, col.2, line 1-10), which leads to depleted repeat sequences. Second, the dependent claim 127 clearly teach Cot1 sequences as repeat sequences and pre-hybridization of the array with Cot1 DNA hybridizes to the cot1 sequences in the amplified DNA on the array and lead to depleted repeat sequences. Accordingly Fiegler does teach said repeat depletion and the rejection is maintained and re-written as above to include new claim 148 limitations.

7. With regard to the rejection of claims 125-132, 139-147 under 35 USC 102(b) as being anticipated by Hussey et al., Applicants' arguments were found persuasive in-part. The arguments drawn to no teaching of array comprising amplified sequences, Applicants' arguments were found unpersuasive because Hussey et al. does teach use of an array or gene chip comprising PCR products or clones, apart for the use of immobilized metaphase spreads (see at least page 16, example 2 of Hussey et al. reference). However, Hussey et al. does not teach depleted repeat sequences of the array. Thus the rejection is moot and the rejection is withdrawn herein.

### ***Conclusion***

No claims are allowable.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suryaprabha Chunduru whose telephone number is 571-272-0783. The examiner can normally be reached on 8.30A.M. - 4.30P.M, Mon - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on 571-272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Suryaprabha Chunduru/

Primary Examiner, Art Unit 1637